



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/727,413

12/04/2003

Cristian Fierro

OBC-127

7711

24963

7590

11/02/2007

ENERGY CONVERSION DEVICES, INC.

2956 WATERVIEW DRIVE

ROCHESTER HILLS, MI 48309

EXAMINER

BOS, STEVEN J

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

11/02/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/727,413	<b>Applicant(s)</b> FIERRO ET AL.	
	<b>Examiner</b> Steven Bos	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21 and 46-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21, 46-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1793

It is noted that only claims 1-20,22-45 have been cancelled. Rule 1.121 has been waived with regard to instant claims 46 and 47 being identified as new claims as well as the identification of changes thereto. They should have been identified as currently amended as compared to previous claims 46 and 47 along with changes made therein.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21,46-69 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 21, "oxygen mixing with said sulfuric acid to form an oxygen-containing sulfuric acid solution" is new matter. Specific support needs to be pointed to.

In claim 21, "reacting said oxygen-containing sulfuric acid solution with bulk nickel metal ... wherein the oxygen-containing sulfuric acid solution is controlled within a pH range, wherein the difference between the maximum pH and the minimum pH of the pH range is 5.9 or less" is new matter. Specific support needs to be pointed to.

In claim 47, "the difference between the maximum pH and minimum pH of the pH range is 2.5 or less" is new matter.

Art Unit: 1793

In claim 48, the pH of the oxygen-containing sulfuric acid solution is controlled to a pH of less than 6.0" is new matter.

In claim 51, "pH of the oxygen-containing sulfuric acid solution is controlled to a pH of less than 4.0" is new matter.

In claim 52, "greater than 1% of the bulk nickel is reacted per hour" is new matter.

In claim 53, "the oxygen-containing sulfuric acid solution reacts with bulk nickel metal at a temperature of 95 degrees Celsius or less" is new matter.

In claim 54, "greater than 1% of the bulk nickel is reacted per hour" is new matter.

In claim 56, "the first pressure differs from the second pressure by an amount between 1 psi and 140 psi" is new matter.

In claim 57, "the first pressure is in a range of about 10 psi to about 149 psi and the second pressure is in a range of about 11 psi to about 150 psi" is new matter.

In claim 58, "the bulk nickel metal has an average size greater than 1 mm" is new matter. It appears that – 0.1 mm – was intended.

In claim 59, "the bulk nickel metal has an average size of greater .254 cm in diameter" is new matter.

In claim 60, "the bulk nickel metal has an average size of .245 cm to 3.81 cm in diameter" is new matter. It appears that – 0.254 cm to 3.81 cm – was intended.

In claim 61, "the surface area of the bulk nickel is .20 square centimeters or greater" is new matter.

In claim 65, “3) supplying oxygen to the system, said oxygen mixing with said sulfuric acid to form an oxygen-containing sulfuric acid solution; and 4. reacting said oxygen-containing sulfuric acid solution with the bulk nickel metal in the enclosed reactor to produce nickel sulfate solution, wherein the temperature during the reaction is less than 95 degrees Celsius” is new matter.

In claim 66, “greater than 1% of the bulk nickel is reacted per hour” is new matter.

In claim 67, “the bulk nickel metal has an average size greater than .1 mm in diameter” is new matter. It appears that – 0.1 mm – was intended.

In claim 68, “the bulk nickel metal has an average size of greater .254 cm in diameter” is new matter.

In claim 69, “3) supplying oxygen to the system, said oxygen mixing with said sulfuric acid to form an oxygen-containing sulfuric acid solution; and 4.) reacting the oxygen-containing sulfuric acid solution with the bulk nickel metal in the enclosed reactor at a controlled pH, wherein the temperature is less than 95 degrees Celsius and wherein the oxygen-containing sulfuric acid is a controlled within a pH range, the difference between the maximum pH and the minimum pH of the controlled pH range being 2.5 or less” is new matter.

Applicant points to [0035], [0043], [0040], [0036] in US Pub. 2005/0123469 for support however support cannot be found for those rejected above.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 1793

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 56,57,63,66-69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 56,57, "the first pressure" and "the second pressure" lack(s) proper antecedent basis in the claim(s).

In claim 63, "said nickel sulfate ... weight percent" is awkward and indefinite. It appears that – said nickel sulfate solution has a nickel metal concentration of about 10 weight percent – was intended.

Claims 66-68 are indefinite as they depend from cancelled claim 41.

In claim 69, 4.), "wherein the temperature is less than 95 degrees Celsius" is indefinite as to what this refers since "the temperature" lack(s) proper antecedent basis in the claim(s).

Applicant's arguments filed September 12, 2007 have been fully considered and they are persuasive over the previous prior art rejections.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1793

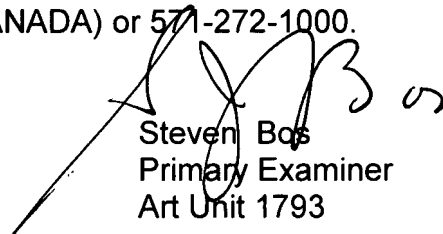
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Bos whose telephone number is 571-272-1350. The examiner can normally be reached on M-F, 9AM to 6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stan Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Steven Bos  
Primary Examiner  
Art Unit 1793

sjb